An experimental barley line on increase.

Biennial Report, 1971-73

THE AGRONOMY SEED FARM

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This is the ninth report on the operations of the Agronomy Seed Farm, Casselton, North Dakota. These reports have been made in alternate years after the biennial meeting of the Agronomy Seed Farm Council. The period covered in this report is from July 1, 1971 to July 1, 1973.

The Agronomy Seed Farm was established for the purpose of increasing Foundation seed of new varieties and maintaining supplies of pure seed of older, yet desirable varieties. The biennial report of 1969-71[1] summarized in detail the origin and purpose of the Agronomy Seed Farm.

Varieties and experimental lines of crops increased or maintained at the Agronomy Seed Farm and at several North Dakota Branch Experiment Stations are determined each year by the Seedstocks Project in consultation with personnel of the Department of Agronomy, North Dakota State University, and the North Dakota Agricultural Experiment Station.

Production

During this reporting period, more than 30,000 bushels of Foundation and Registered seed of small grain were produced. In addition, more than 45,000 pounds of millet, 4,000 pounds of grass seed and 11,500 pounds of sunflower seed, all of Foundation grade also were grown (see Table 1).

Foundation and Registered seed of "older" varieties (usually one year or more after release) is made available each fall until December 15, first to producers of Certified seeds, then to any producer. This policy is an attempt to ensure that sufficient Foundation and Registered seed is available to producers of Registered and Certified seed, and that after December 15 other growers wishing such high quality seed can secure it. Distribution of a newly-released variety is made through the Seedstocks Project from the Agronomy Seed Farm and/or from various Branch Experiment Stations in accordance with the seed increase policies of the Agricultural Experiment Station.

Experimentals

Seed production listed in Table 1 is almost entirely of named varieties. In addition to this production, fairly large increases of advanced experimental breeding lines (potential varieties) often are made. This includes experimental lines that other states are planning to release and have offered to North Dakota. Such increases are de-

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[1] *North Dakota Farm Research, Vol. 29, Number 2. November-December, 1971.*

pendent on adaptability and performance determined through tests in the nursery by plant breeders. In 1971-72, nine experimentals were grown and five became varieties. In 1972-73, 10 experimentals were increased and five became varieties. New varieties of winter wheat and rye are not included in the seed production list in Table 1 as seed was not harvested durng the report period, but seed of new varieties of both winter wheat and rye were harvested after July 1, 1973.

New Varieties

The following list in Table 1 includes 37 varieties of 12 crops. Thirteen of these varieties were new during this reporting period. The new varieties and their origin are as follows:

Crop	Variety	Source
Durum Wheat	Rolette	N. Dak.
	Ward	N. Dak.
Hard Red Spring Wheat	Olaf	N. Dak.
Hard Red Winter Wheat	Bronze	S. Dak.
Barley	Beacon	N. Dak.
	Cree	Minn.
Oats	Chief	S. Dak.
	Nodaway 70	Mo.
	Grundy	Iowa
	Dal	Wis.
Soybeans	Ada	Minn.
	Wilkin	Minn.
	Swift	Minn.

Production Practices

Rotations are planned carefully to avoid inseparable seed mixtures from recurring volunteer plants. Planting, harvesting and cleaning equipment is always meticulously cleaned each time a different crop or crop variety is handled. Most of the fertilizer is applied in the fall, and all tillage operations are done as early as soil conditions and schedules permit. A combination of chemical and mechanical weed control is practiced. Soybeans generally are grown in the rotations instead of summer fallowing.

Early increase of potential varieties and repurification of older varieties are sown in rows to permit better roguing and to promote highest production from limited amounts of seed.

Seed Prices

The price of Foundation and Registered seeds sold by the Agronomy Seed Farm is established by the Seedstocks Project with advice of producers, seed trade representatives, etc. Since the Seedstocks Project is a tax-supported project, prices are kept as reasonable as possible.

Other Activities

Along with the production of Foundation seed and the increase of new varieties, the superintendent of the Agronomy Seed Farm supervises

Table 1. Seed Production at the Agronomy Seed Farm

Crop	Variety	1971-72 (Bushels)	1972-73 (Bushels)
Hard Red Winter Wheat	Winoka	499	—
	Bronze		250
Hard Red Spring Wheat	Waldron	1601	1488
	Olaf	49	1326
Durum Wheat	Leeds		109
	Rolette	2864	
	Lakota	426	
	Ward		1211
Barley	Dickson	278	828
	Larker	1323	1419
	Nordic	2534	1060
	Cree	1237	
	Beacon		1687
	Conquest		9
	Bonanza		7
	B-140	1408	
	B-141		71
	B-142	226	
Oats	Dal		1251
	Chief		451
	Grundy		600
	Nodaway 70		576
	Dawn	110	
Rye	Cougar		25
Flax	Linott	309	467
	Nored	—	
Soybeans	Norman	—	
	Traverse	—	
	Morsoy	—	
	Ada	29	502
	Swift	107	779
	Wilkin	33.5	741
	Vansoy	54	—
Pinto Beans	U of I 114	347	417
	Wyo. 166		87
Millet	Panhandle	30720#	—
	Turghai	1260#	10651#
	Snobird		3083#
Sunflowers	Peredovik		4275#
	Mingren	7380#	
Crested Wheatgrass	Nordan	7380#	1050#

the production of the Crop Quality Council trials to evaluate wheat quality and provides the management, labor and equipment for seedbed preparation and some harvesting on the Dalrymple Experiment Plot. The Dalrymple Experimental Plot is 160 acres adjacent to the Agronomy Seed Farm used for research by the Departments of Agronomy, Soils, Plant Pathology and Horticulture at North Dakota State University. The Seedstocks Project supervises the requests and allocations of experimental land on the Dalrymple Experimental Plot.

Improvements

During the report period some additional farm equipment was purchased. Several field ditches were established and several fields were surveyed, graded and sloped to improve surface drainage.

The financial report for the period July 1, 1971 to July 1, 1973 is shown in Table 2. The income for the Agronomy Seed Farm is entirely from seed sales as no appropriated funds are received.

Future Plans and Council Members

Six hopper-type bins and drying facilities will be set up near the present cleaning plant, and will be ready for use late in 1973. More land will be leveled and additional drain ditches established.

The Agronomy Seed Farm Council met on July 18, 1973, and at that meeting voted to hold meetings annually. Farmer members of this Council are appointed for six-year terms by the director of the Agricultural Experiment Station. They receive no compensation for this service. Council members are as follows:

Terms expiring in 1973

Ed Manthei, Leonard
A. H. Berg, Wyndmere
William C. Witteman, Mohall
Joe Weiss, Belfield

Terms expiring in 1975

Warren Rockenbach, Fort Clark
Arnold Skarsgard, Makoti
Herman Schmitz, Williston
Lyle Dawson, Jr., Fort Rice

Terms expiring in 1977

Victor Legler, Jamestown
Al Kenner, Leeds
Don Brusegard, Gilby
Jerome Holter, Hatton

Terms expiring in 1979

To be appointed soon.

Commissioner of Agriculture and Labor

Arne Dahl, Bismarck

State Seed Commissioner

Everett Tool, Fargo

Extension Agronomist

Howard Wilkins, Fargo

Representing the North Dakota Crop Improvement Association

Joe Peltier, Arthur

Representing North Dakota Agricultural Association

Don Kenna, Fargo

A local farmer

George Howe, Jr., Casselton

Chairman, Department of Agronomy

J. F. Carter, Fargo

Table 2. Agronomy Seed Farm account as provided by office of the Director, North Dakota Agricultural Experiment Station, North Dakota State University, Fargo.

Balance on hand July 1, 1971		$50,959.51
Income from farm:		
Seed and misc. grain	$61,034.37	
Other miscellaneous	10.25	
		61,044.62
Total		$112,004.13
Expenditures		
Farm operation	$54,304.81	
Machine and equipment	2,256.12	
Storage building	206.80	
All farm operations		56,767.73
Excess income over expenditures		$55,236.40
Balance on hand June 30		

Balance on hand July 1, 1973		$55,236.40
Income from farm:		
Seed and misc. grain	$86,855.36	
Other miscellaneous	161.65	
		87,017.01
Total		$142,253.41
Expenditures		
Farm operations	$65,688.25	
Machinery and equipment	2,196.00	
Storage building	38.10	
		$67,922.35
Balance on hand July 1, 1973		$74,331.06